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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,759	12/14/2001	Frank Yen-Jer Shih	47600/JDC/A23	8164

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EXAMINER

SASTRI, SATYA B

ART UNIT PAPER NUMBER

1713

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/017,759

Applicant(s)

SHIH ET AL.

Examiner

Satya B Sastri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 49 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 7-17 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other:

DETAILED

1. This office action is in response to the amendment filed on August 04, 2003.

Acknowledgement is made of cancellation of non-elected *claims 21-48*. *Claims 1-20 and 49* are now pending. In view of the response and amendment, rejection of *claim 6* under U.S.C. 112, second paragraph is withdrawn; rejection of *claims 1-4, 18-20* under 35 U.S.C. 102 (b) as being anticipated by Baumstark et al. (US 5,774,540) is sustained, rejection of *claims 5 and 6* under 35 U.S.C. 103 (a) as being obvious over Baumstark in view of Brown et al. (US 4,629,663) is withdrawn and rejection of *claims 7-17* under 35 U.S.C. 103 (a) as being obvious over Shih et al. (WO 99/04981) in view of Baumstark is withdrawn.

Response to Applicants

2. Applicants argue that the prior art to Baumstark discloses a broad genus of hard and soft monomers which are not "soft acrylic" and "hard acrylic monomers" and further include that there is nothing to direct the skilled person to select butyl acrylate over e.g. ethyl acrylate or ethylhexyl acrylate (page 10). However, it is noted that the genus is not very broad given the fact that the list of nine preferred monomers listed (column 6, lines 55-64) contains 4 monomers i.e. butyl acrylate, methyl methacrylate, hydroxyethyl methacrylate or hydroxy propyl methacrylate and an acid monomer that are disclosed in the instant invention and within the claimed range. Additionally, the **working examples** in columns 12-18 (D1-D6 and comparative examples VD1-

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VD4) **are based on** the specific hard and soft monomers elected in the instant invention, i.e. **methyl methacrylate and butyl acrylate** within the claimed range.

3. Applicants argue that claim 1 includes 1-5% of hydroxy-lower organic (meth)acrylate as opposed to the broad sub-genera of optional compounds to cause postcrosslinking. Again, it is to be noted that the specific hydroxy-lower organic (meth)acrylate is included in the list of preferred monomers in column 6, lines 55-64 as indicated earlier.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. ***Claims 5 and 6*** are rejected under 35 U.S.C. 103(a) as being unpatentable over obvious over Baumstark et al. (US 5,774,540) in view of Bernard (US 5,623,011) and Brown (US 4,629,663).

The disclosure of Baumstark et al. is in regard to an aqueous polymer emulsion comprising a copolymer of hard monomers, soft monomers, and nitrogen-containing adhesion-promoting monomers (abstract). The main part of the monomer composition comprising hard and soft monomers accounts for **more than 50% by weight**, based on the monomer composition

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(column 5, lines 22-26). The monomers may be selected exclusively from the following monomers : **n-butyl acrylate**, 2-ethylhexyl acrylate, ethyl acrylate, **methyl methacrylate**, n-butyl methacrylate, **styrene**, acrylic acid, **methacrylic acid**, hydroxyl propylacrylate etc.

(column 6, lines 55-64). Water soluble monomers such as acrylic and **methacrylic acid** may be present in an amount of from **0.1 to 5%**, by weight (column 5, lines 30-37). Crosslinking agents such as **alkylene glycol diacrylates and dimethacrylates** may be used in an amount of **0.01 to 5% by weight** (column 5, line 45-59). The disclosure further includes that the monomer compositions may include from **0.5 to 5%** by weight, of monomers which do not affect crosslinking until during film formation. Examples of monomers suitable for post crosslinking include hydroxyethyl and **hydroxypropyl acrylate** and methacrylate are also suitable for post crosslinking (column 6, lines 40-43). The monomer composition further includes as adhesion promoting monomers, monomers having at least one amino, ureido or N-heterocyclic group. Typical examples of polymerizable ureido monomers disclosed include **N-(3allyloxy2-hydroxypropyl)aminoethyleneethylurea**, **N-(methacrylamidoethyl)ethyleneurea** etc. (column 7, lines 15-55). The **ureido monomer** is polymerized in an amount from **0.1 to 10% by weight**, based on the total amount of monomers to be polymerized (column 19, lines 39-40). The various monomers may be copolymerized by free radical **emulsion polymerization** (abstract).

The difference between the present invention and prior art is the presence a reactive surfactant based on sodium vinyl sulfonate in the compositions.

The disclosure of Bernard is in regard to pressure sensitive adhesives prepared in the presence of reactive surfactant which polymerizes during formation of the polymer and becomes an integral part of the polymer. Reactive surfactants include sodium vinyl sulfonate as well as

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sodium styrene sulfonate. Thus, **this prior art teaches the functional equivalence of the two reactive surfactants**. The disclosure of Brown et al. is in regard to an adhesive composition derived from alkyl acrylate monomer composition containing small amounts **sodium styrene sulfonate**. Use of such reactive emulsifiers is useful in producing a coagulum-free latex without the use of an external emulsifier (column 3, lines 16-27). In light of such benefits, it would have been obvious for one of ordinary skill in the art at the time the invention was made to include reactive emulsifier/surfactant in the monomer compositions of Baumstark et al. and thereby obtain the present invention.

Allowable Subject Matter

6. **Claim 49** is allowed.

7. **Claims 7-17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The claims are allowable over closest prior art to Baumstark et al. **Claims 7-17** relate to compositions comprising particulate filler and a mordant. Prior art compositions do not teach such additives. **Claim 49** explicitly teaches a monomer composition with triethylene glycol diacrylate and a ureido functional monomer.

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Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satya Sastri at (703) 305-8490.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached at (703) 308-2450.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 308-0661.

SATYA SASTRI

October 2, 2003



DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700